#### PRESSURE GAUGES

#### PART 1 GENERAL

#### 1.1 SUMMARY

- A. Section Includes: Requirements for furnishing and installing gauges and isolating devices as shown and specified.
- B. Related Work Specified in Other Sections Includes:
  - 1. Storm Water Pump Station
  - 2. Miscellaneous Pipe and Fittings

#### 1.2 REFERENCES

- A. Codes and standards referred to in this Section are:
  - 1. ASME B40.1 Gages Pressure, Indicating Dial Type Elastic Element

#### 1.3 SUBMITTALS

A. Provide all submittals, including the following, as specified in the "Submittals" section of these specifications.

# 1.4 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle all products and materials as specified in the "Materials and Equipment" section of these specifications, and as follows:

#### 1.5 PAYMENT

A. Pressure Gauges will not be paid for separately but shall be included in the cost per L SUM for PUMP STATION.

## PART 2 PRODUCTS

## 2.1 MANUFACTURERS

- A. Acceptable manufacturers are listed below. Other manufacturers of equivalent products may be submitted.
  - 1. Gauges
    - a. Mastergauge by Marsh Instrument Company.
    - b. Supergauge by U.S. Gauge, a Division of Ametek, Inc.

- c. Duragauge by Ashcroft, Industrial Valve and Instrument Division,
  Dresser Industries.
- d. Helicoid Gauges by Helicoid Gauge Division, ACCO (American Chain and Cable Company, Inc.)

## 2.2 DESIGN

- A. General: Provide pressure gauges of the dial-indicating bourdon tube type. Manufacture gauges to the requirements of ASME B40.1, Gauges, Pressure and Vacuum, Indicating Dial Type Elastic Element, except as modified herein. Locate gauges as shown or specified.
- B. Pressure Gauges: Provide Grade 2A pressure gauges with the specified with an accuracy of 0.5 percent of the maximum scale reading.

#### 2.3 CONSTRUCTION

A. Construct gauges with a nominal size of 4-1/2 inches. Provide bottom located pressure connection, 1/4-inch NPT, male fitting extending a minimum of 1-1/4 inches beyond the case and with large wrench flats. Construct the bourdon tube and fitting of bronze. Provide a weatherproof case of the stem mounted type, constructed of shock-resistant plastic. Design the movement to be rotary gear or helical roller type designed to minimize wear and maintain accuracy. Make provisions for adjustment of zero reading. Manufacture dials white faces with black numerals and markings. Provide gasket sealed glass windows to prevent moisture and dust from entering the gauge case.

## 2.4 DIAPHRAGM SEALS

- A. General: Furnish diaphragm seals to isolate the process fluid from the pressure gauge. Provide Grade 2A gauge seal and gauge combined accuracy of 0.5 percent of the maximum scale reading. Equip the seal with a 1/4-inch NPT pressure device connection and a 1/2-inch NPT process connection. Design the 2-1/2 inches minimum diameter seal for continuous duty, fitted with a 1/4-inch NPT flushing connection, and of the cleanout type. Manufacture the diaphragm of Type 316 stainless steel. Construct the lower and upper case of PVC plastic. Make all wetted parts corrosion resistant to the process liquid. Provide liquid filled case as recommended by the manufacturer. Factory assemble and calibrate all liquid filled pressure gauge-diaphragm seal units at the point of manufacturer and ship and install as a unit.
- B. Shutoff Cocks: Provide shutoff cocks, for each gauge, constructed of brass.

# PART 3 EXECUTION

# 3.1 INSTALLATION

A. General: Install pressure gauges in accordance with the manufacturer's recommendations and approved shop drawings and as specified in the "Submittals" section of these specifications.

**END OF SECTION** 

#### STRUCTURAL STEEL

## PART 1 - GENERAL

#### 1.1 SUMMARY

A. This Section includes structural steel and grout.

## 1.2 PERFORMANCE REQUIREMENTS

- A. Connections: Provide details of simple shear connections required by the Contract Documents to be selected or completed by structural-steel fabricator to withstand ASD-service loads indicated and comply with other information and restrictions indicated.
  - 1. Select and complete connections using schematic details indicated and AISC's "Manual of Steel Construction, Allowable Stress Design," Part 4.

## 1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Show fabrication of structural-steel components.
- C. Welding certificates.
- D. Mill test reports.
- E. Source quality-control test reports.

## 1.4 QUALITY ASSURANCE

- A. Fabricator Qualifications: A qualified fabricator who participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category Sbd.
- B. Welding: Qualify procedures and personnel according to AWS D1.1, "Structural Welding Code--Steel."
- C. Comply with applicable provisions of AISC's "Code of Standard Practice for Steel Buildings and Bridges."
- D. Preinstallation Conference: Conduct conference at Project site.

#### 1.5 PAYMENT

A. Structural Steel will not be paid for separately but shall be included in the cost per L SUM for PUMP STATION.

#### **PART 2 - PRODUCTS**

## 2.1 STRUCTURAL-STEEL MATERIALS

- A. Channels, Angles and Shapes: ASTM A992 or A572 Grade 50.
- B. Plate and Bar: ASTM A992 or A572 Grade 50.
- C. Cold-Formed Hollow Structural Sections: ASTM A 500, Grade B, structural tubing.
- D. Steel Pipe: ASTM A 53/A 53M, Type E or S, Grade B.
- E. Welding Electrodes: Comply with AWS requirements.

## 2.2 BOLTS, CONNECTORS, AND ANCHORS

- A. High-Strength Bolts, Nuts, and Washers: ASTM A 325, Type 1, heavy hex steel structural bolts; ASTM A 563 heavy hex carbon-steel nuts; and ASTM F 436 hardened carbon-steel washers.
  - 1. Finish: Plain.
  - 2. Direct-Tension Indicators: ASTM F 959, Type 325 compressible-washer type.
    - a. Finish: Plain.
- B. Shear Connectors: ASTM A 108, Grades 1015 through 1020, headed-stud type, cold-finished carbon steel; AWS D1.1, Type B.
- C. Unheaded Anchor Rods: ASTM F 1554, Grade 36.
  - 1. Configuration: Hooked.
  - 2. Finish: Plain.
- D. Headed Anchor Rods: ASTM F 1554, Grade 36, straight.
  - 1. Finish: Plain.
- E. Threaded Rods: ASTM A 36/A 36M.

1. Finish: Plain

## 2.3 PRIMER

A. Primer: Chromate-free, nonasphaltic, rust-inhibiting primer by Tnemec Company, Inc. or equal.

## 2.4 GROUT

A. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

#### 2.5 FABRICATION

- A. Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC's "Code of Standard Practice for Steel Buildings and Bridges" and AISC's "Specification for Structural Steel Buildings--Allowable Stress Design and Plastic Design."
- B. Shear Connectors: Prepare steel surfaces as recommended by manufacturer of shear connectors. Use automatic end welding of headed-stud shear connectors according to AWS D1.1 and manufacturer's written instructions.

# 2.6 SHOP CONNECTIONS

- A. High-Strength Bolts: Shop install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
  - 1. Joint Type: Snug tightened.
- B. Weld Connections: Comply with AWS D1.1 for welding procedure specifications, tolerances, appearance, and quality of welds and for methods used in correcting welding work.

## 2.7 SHOP PRIMING

- A. Shop prime steel surfaces except the following:
  - 1. Surfaces embedded in concrete or mortar. Extend priming of partially embedded members to a depth of 2 inches.
  - 2. Surfaces to be field welded.
  - 3. Surfaces to be high-strength bolted with slip-critical connections.
  - 4. Surfaces to receive sprayed fire-resistive materials.

- 5. Galvanized surfaces.
- B. Surface Preparation: Clean surfaces to be painted. Remove loose rust and mill scale and spatter, slag, or flux deposits. Prepare surfaces according to the following specifications and standards:
  - 1. SSPC-SP 2, "Hand Tool Cleaning."
  - 2. SSPC-SP 3, "Power Tool Cleaning."
- C. Priming: Immediately after surface preparation, apply primer according to manufacturer's written instructions and at rate recommended by SSPC to provide a dry film thickness of not less than 1.5 mils. Use priming methods that result in full coverage of joints, corners, edges, and exposed surfaces.

# 2.8 SOURCE QUALITY CONTROL

- A. Owner will engage an independent testing and inspecting agency to perform shop tests and inspections and prepare test reports. Comply with testing and inspection requirements of Part 3, Article "Field Quality Control."
- B. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.
- C. In addition to visual inspection, shop-welded shear connectors will be tested and inspected according to requirements in AWS D1.1 for stud welding.

#### **PART 3 - EXECUTION**

## 3.1 ERECTION

- A. Examination: Verify elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments, with steel erector present, for compliance with requirements.
  - 1. Proceed with installation only after unsatisfactory conditions have been corrected.
- B. Set structural steel accurately in locations and to elevations indicated and according to AISC's "Code of Standard Practice for Steel Buildings and Bridges" and "Specification for Structural Steel Buildings--Allowable Stress Design and Plastic Design."
- C. Base and Bearing Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting base and bearing plates. Clean bottom surface of base and bearing plates.
  - 1. Set base and bearing plates for structural members on wedges, shims, or setting nuts as required.

- 2. Weld plate washers to top of base plate.
- 3. Snug-tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of base or bearing plate before packing with grout.
- 4. Promptly pack grout solidly between bearing surfaces and base or bearing plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkageresistant grouts.
- D. Maintain erection tolerances of structural steel within AISC's "Code of Standard Practice for Steel Buildings and Bridges."

#### 3.2 FIELD CONNECTIONS

- A. High-Strength Bolts: Shop install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
  - 1. Joint Type: Snug tightened.
- B. Weld Connections: Comply with AWS D1.1 for welding procedure specifications, tolerances, appearance, and quality of welds and for methods used in correcting welding work.
  - 1. Comply with AISC's "Code of Standard Practice for Steel Buildings and Bridges" and "Specification for Structural Steel Buildings--Allowable Stress Design and Plastic Design" for bearing, adequacy of temporary connections, alignment, and removal of paint on surfaces adjacent to field welds.

## 3.3 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to inspect field welds and high-strength bolted connections.
- B. Bolted Connections: Shop-bolted connections will be tested and inspected according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
- C. Welded Connections: Field welds will be visually inspected according to AWS D1.1.
  - 1. In addition to visual inspection, field welds will be tested according to AWS D1.1 and the following inspection procedures, at testing agency's option:
    - a. Liquid Penetrant Inspection: ASTM E 165.
    - b. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration will not be accepted.
    - c. Ultrasonic Inspection: ASTM E 164.

- d. Radiographic Inspection: ASTM E 94.
- D. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.

# END OF SECTION

#### LEAKAGE TESTS

## PART 1 GENERAL

#### 1.1 SUMMARY

- A. Section Includes: Testing for any signs of leakage in all pipelines and structures required to be watertight.
  - 1. Test gravity sewers and drain lines by the Infiltration Test, as specified.
  - 2. Test air and gas lines with compressed air.
  - 3. Test all other pipelines with water under the specified pressures.
- B. Operation of Existing Facilities: Conduct all tests in a manner to minimize as much as possible any interference with the day-to-day operations of existing facilities or other contractors working on the site.

## 1.2 PERFORMANCE REQUIREMENTS

- A. Written Notification of Testing: Provide written notice when the work is ready for testing, and make the tests as soon thereafter as possible.
  - 1. Personnel for reading meters, gauges, or other measuring devices, will be furnished.
  - 2. Furnish all other labor, equipment, air, water and materials, including meters, gauges, pumps, compressors, fuel, water, bulkheads and accessory equipment.

#### 1.3 REFERENCES

- A. Codes and standards referred to in this Section are:
  - 1. ASTM C 828 Practice for Low-Pressure Air Test of Vitrified Clay Pipe Lines (4 to 12 inches)
  - 2. ASTM C 924 Practice for Testing Concrete Pipe Sewer Lines by Low-Pressure Air Test Method
  - 3. AWWA C 600 Installation of Ductile-Iron Water Mains and Their Appurtenances

#### 1.4 SUBMITTALS

A. General: Provide all submittals, including the following, as specified in the "Submittals" section of these specifications.

- B. Testing Report: Prior to placing the sewer system in service submit for review and approval a detailed bound report summarizing the leakage test data, describing the test procedure and showing the calculations on which the leakage test data is based.
- C. Illinois EPA Requirements: The Illinois EPA requires that the information be bound in a binder and presented in two categories.
  - 1. Summarize data presenting at least the following information in columnar form:

Sewer Line (MH to MH)	Test Method Used	Test Result	Date	Result and Date	Reference Page
#1	Exfiltration	Passed	09/01/79	Passed 09/01/79	1

a. The "reference page" would be the second category of the binder, in which test procedures would be described in detail for the section of sewer line referenced as outlined below.

#### 2. Reference Sewer Line Data

## a. For Exfiltration Testing

- (1) The length and diameter of the section of line tested (MH to MH), including any laterals or house connections.
- (2) A complete description of the test procedure, including:
  - (a) Which manhole(s) were open and which were blocked off and where (inlet and outlet) and how.
  - (b) How the measurements were taken, and the actual measurements.
  - (c) The manhole #(s) in which the drop of water was measured and the total drop for the section of line being tested.
  - (d) The source of the water used in the test.
  - (e) The water levels in the upper and lower ends of the line being tested at the start of the test.
- (3) Show all calculations in detail and explain for both allowable and actual exfiltration rates.
- (4) The name of the inspector/tester and the date(s) and time(s) of all testing performed, including any retesting.
- (5) A description of any repairs made.

## b. For Infiltration Testing

- (1) The length and diameter of the section of line being tested, including any laterals.
- (2) A complete description of the test procedure, including:
  - (a) Trench backfilling and jetting status
  - (b) The water depth maintained over the sewer
  - (c) The source of the water used in the test
  - (d) The method of flow measurement, and flow data
- (3) Show all calculations in detail and explain for both allowable and actual infiltration rates.
- (4) The name of the inspector/tester and the date(s) and time(s) of all testing performed, including any retesting.
- (5) A description of any repairs made.

## c. For Air Testing

- (1) The length and diameter of the section of line tested (MH to MH) including any laterals.
- (2) A complete description of test procedures and methods, including:
  - (a) Trench backfilling and sewer cleaning status
  - (b) Type of plugs used and where
  - (c) Depth of sewer, and ground water pressure over sewer pipe
  - (d) Stabilization time period and air pressure
  - (e) Actual air test pressures used if ground water is present
  - (f) The allowed time by specifications
  - (g) The actual test time
  - (h) The air pressure at beginning and end of test
- (3) The name of the inspector/tester and the date(s) and time(s) of all testing, including any retesting.
- (4) A description of any repairs made.
- d. Deflection testing for Plastic Pipe

- (1) The length and diameter of the test line
- (2) A complete description of the method used, including the type of equipment used
- (3) The allowable deflection vs. actual deflection
- (4) The name of the inspector/tester and the date(s) and time(s) of all testing, including any retesting
- (5) A description of any repairs made

#### 1.5 PAYMENT

A. Leakage Tests will not be paid for separately but shall be included in the cost per L SUM for PUMP STATION.

## PART 2 PRODUCTS

Not Used

## PART 3 EXECUTION

- 3.1 PRESSURE TESTS OF EXPOSED PLANT PIPING
  - A. Testing: Pressure test exposed pipelines for leakage by maintaining the fluid in the pipe at the specified pressure for a period of 60 minutes. Examine all accessible joints during the test. Stop all visible leakage.
- 3.2 PRESSURE TESTS OF BURIED OR CONCEALED PLANT PIPELINES AND WATER MAINS
  - A. Testing: Completely backfill all harnessed sections of buried piping before such sections are tested.
    - 1. Pressure test buried or concealed pipelines for leakage by maintaining the fluid in the pipe at the specified pressure for a minimum period of 4 hours.
    - 2. Pressure test the piping for leakage as a whole or in sections, valved or bulkheaded at the ends. Apply the specified pressure to the piping through a tap in the pipe by means of a hand pump or other approved method. Do not use air for testing.

B. Allowable Leakage: Stop all visible leakage. Do not allow leakage for any piping, as determined by the above test, to exceed the allowable leakage for cast-iron water mains as given by the following formula in Section 4.2 of AWWA C600:

$$L = \underline{S \times D \times (P)^{1/2}}$$
133,200

in which L is the allowable leakage in gallons per hour, S is the length of water main tested in feet, D is the nominal diameter of the pipe in inches and P is the average test pressure in psi gauge.

## 3.3 VALVE TESTING

- A. Testing: Operate valves in the section under test through several complete cycles of closing and opening. In addition, have the test pressure for each valve, when in the closed position, applied to one side of the valve only. Test each end of the valve in this manner.
- B. Test Pressure: Test each valve at the same test pressure as that specified for the pipe in which the valve is installed.
- C. Leakage: Stop all external and internal leakage through the valves.
- D. Movement: Stop all valve movement or structural distress.

#### 3.4 LEAKAGE TESTS FOR SEWERS

- A. Submerged Testing Procedure: When the groundwater level is above the sewer, test sewers for infiltration or leakage as follows:
  - 1. Measure the infiltrated flow of water by means of a weir set up in the invert of the sewer at a known distance from a temporary bulkhead or other limiting point of infiltration.
  - 2. Test after the sewer or sewers have been pumped out, if necessary.
  - 3. Do not start testing until normal infiltration conditions are established in the work to be tested.
    - a. Inspect gravity sewer visually for infiltration.
    - b. Pump the sewers dry and allow the groundwater to rise above the crown of the sewer.
    - c. Inspect the sewer on the inside and seal all visible leaks completely.
- B. Nonsubmerged Testing Procedure: If the groundwater level is below the top of the sewer, test for leakage as follows:

- 1. Construct a bulkhead in the sewer at the manhole at the lower end of the section under test.
- 2. Fill the section being tested with water until the level of water is one foot above the crown of the sewer in the manhole at the upper end of the test section.
- 3. Leakage will be the measured amount of water added to maintain the water at that level.
- 4. Carry on tests for a minimum of four hours with readings at 30-minute intervals.
- 5. In computing the length of sewer contributing infiltration or leakage, include the length of house connections tested, if any, in the total length.
- 6. The quantity of infiltration or leakage for sewers shall not exceed 200 gallons per inch of diameter per mile per 24 hours for sewers up to and including 24 inches in diameter, and shall not exceed 5,000 gallons per mile per 24 hours for all sizes larger than 24 inches in diameter.
- C. Repair: When the measured infiltration or leakage exceeds the specified amount, locate and repair defective manholes, pipe or pipe joints. If the defective portions cannot be located, remove and reconstruct as much of the original work as necessary to obtain a sewer within the allowable infiltration limits upon such retesting as necessary.
  - 1. Regardless of the amount of infiltration or leakage measured repair and seal in an approved manner all visible or detectable leaks in the sewers, manholes, structures, and other appurtenances.

## 3.5 REPAIR OF PIPING LEAKS

- A. Procedures: Repair leaks as follows:
  - 1. Replace broken pipe or joint assemblies found to leak.
  - 2. When leakage occurs in excess of the specified amount, locate and repair defective valves, pipe, cleanouts or joints.
  - 3. If the excess leakage is determined to be caused by defective materials furnished, improper workmanship, or damage to the materials, make the necessary repairs or replacements at no addition to the Contract Price.
  - 4. If defective portions cannot be located, remove and reconstruct as much of the original work as necessary to obtain piping that meets the leakage requirements specified herein and retest, all at no addition to the Contract Price.

## 3.6 LEAKAGE TESTS FOR STRUCTURES

- A. Structure Leakage Testing: Perform leakage tests of wet wells, tanks, vaults and similar purpose structures before backfilling, by filling the structure with water to the overflow water level and observing the water surface level for the following 24 hours.
  - 1. Make an inspection for leakage of the exterior surface of the structure, especially in areas around construction joints.
  - 2. Leakage will be accepted as within the allowable limits for structures from which there are no visible leaks.
  - 3. If visible leaks appear, repair the structure by removing and replacing the leaking portions of the structure, waterproofing the inside, or by other methods approved.

END OF SECTION

#### **PAINTING**

#### PART 1 GENERAL

## 1.1 SUMMARY

- A. Section Includes: Preparation of surfaces, shop painting of items furnished, field painting of new structures, piping, conduit, ductwork and equipment, and marking of new and existing piping and electrical conduit where indicated.
- B. In all areas of work other than those listed above, this section includes preparation of surfaces, shop painting of items furnished, field painting of new structures, piping, conduit, ductwork and equipment, and marking of new piping and electrical conduit.

#### 1.2 REFERENCES

- A. Codes and standards referred to in this Section are:
  - 1. ASMEA13.1 Scheme for the Identification of Piping Systems
  - 2. SSPC Steel Structures Painting Manual
  - 3. SSPCSP1 Solvent Cleaning
  - 4. SSPCSP6 Commercial Blast Cleaning
  - 5. SSPCSP1O Near-White Blast Cleaning
  - 6. FS-TT-V-51F Asphalt Varnish

#### 1.3 SUBMITTALS

- A. Provide all submittals, including the following, as specified in the "Submittals" section of these specifications.
  - 1. Submit manufacturer's standard color chart for color selection.
  - 2. Where equipment is customarily shipped with a standard finish, submit samples of the proposed color and finish for approval prior to shipping.
  - 3. Furnish affidavits from the manufacturer certifying that materials furnished conform to the requirements specified and that paint products have been checked for compatibility.
  - 4. Submit a supplementary schedule of paint products with mil thickness, and solids by volume, including all paint applied in the shop and in the field. Provide a schedule that is in accordance with the recommendations of the paint manufacturer.
  - 5. Furnish affidavits from the manufacturer certifying that coatings in immersion service contain no water soluble solvents or corrosion inhibitive (active) pigments with slight water solubility.

# 1.4 PAINTING REQUIREMENTS - NEW STRUCTURES AND EQUIPMENT

A. Shop Primed and Finished Items: Furnish the following items with the

manufacturer's standard prime and finish coats applied in the shop: pumps, motors, gears, gear housings, air compressors, temperature control and instrument panels, process air blowers, engines, filters, strainers, meters, panelboards, transformers, boilers, heat exchangers, air handling units, aluminum fascia, motor control centers, aluminum light standards, bar screens, screenings conveying equipment, screenings washing and compacting unit.

- B. Shop Primed and Field Painted Items: Furnish the following items shop primed and field painted: structural steel and wrought metals, pipelines, hangers and supports, valves, valve operators and stands, guard housings, air filter equipment, effluent strainers, heat exchangers, tanks, gas domes.
- C. Field Primed and Finished Items: Field prime and finish, where exposed to view, all items not shop primed or shop finished. This Work generally includes, but is not limited to, the following: interior concrete block, interior concrete walls, columns, beams and ceilings, covering over insulation on piping, electrical conduit systems, small piping and copper tubing, ducts, covering over ducts, exterior PVC piping, valves, and fittings, drain piping.
- D. Unpainted Items: Do not paint the following items, unless otherwise specified: interior structural steel not exposed to view, registers, grilles, dampers and linkage, name and identification plates and tags, floor gratings, brass pipe and fittings, brass valves, stainless steel, wood, cast-iron piping installed underground, stop log panels, surfaces to receive field welding, faying surfaces of high strength bolted connections.

## 1.5 DELIVERY, STORAGE AND HANDLING

- A. General: Deliver, store and handle all products and materials as specified in the "Materials and Equipment" section of these specifications.
- B. Delivery and Storage: Deliver and store paint at the site from the approved manufacturer only.
- C. Packaging and Labeling: Prepare, pack and label paints, stains, varnish or ingredients of paints to be used on the job. Deliver all material to the site in original, unbroken containers.
- D. Storage: Store the painting materials at the site in accordance with applicable codes and regulations and in accordance with manufacturer's instructions. Keep the storage space clean at all times. Take every precaution to eliminate fire hazards.

#### 1.6 PAYMENT

A. Painting will not be paid for separately but shall be included in the cost per L SUM for STORM WATER PUMP STATION.